

other species of the genus, except that on all my specimens there is a very short cylindrical appendage attached underneath to the third segment on the right side. A hemispherical portion at the end is very dark violet, covered with numerous small spines (fig. 13 *a*) and surrounded by a narrow light yellow border (*b*), on which they are rather larger and more scattered. There are a few hairs on the violet part. The end, therefore, resembles a hemispherical file, but I cannot offer the slightest suggestion as to its probable use. Mr. Darwin and Prof. Quekett have kindly examined it for me. The females have no such appendage.

Length about $\frac{1}{2}$.

Hab. Lat. $18^{\circ} 15'$ S., Long. $2^{\circ} 30'$ W. to 4° E.

From the Museum of the College of Surgeons. Collected by Sir E. Home.

EXPLANATION OF PLATE V.

- Fig. 1.* *Pontella Bairdii*. Abdomen. Male. *d.* Expelling matter. *e.* Glutinous matter. *c.* Zoosperms.
Fig. 2. Ditto. Abdomen of female, seen from above. *a.* The empty spermatid tube.
Fig. 3. Fifth pair of legs. Male.
Fig. 4. One of ditto. Female.
Fig. 5. Rostrum.
Fig. 6. Four apical segments of the normal anterior antenna.
Fig. 7. *Monops grandis*. Rostrum.
Fig. 8. Fifth pair of legs. Male.
Fig. 9. One of ditto. Female.
Fig. 10. Four apical segments of normal anterior antenna.
Fig. 11. Abdomen. Female. Seen from above.
Fig. 12. Ditto. Male. Seen from the side and below.
Fig. 13. A small piece of the dark part of the abdominal appendage of ditto.

[To be continued.]

XIV.—Notes on some new or little-known Marine Animals.

By P. H. GOSSE, A.L.S.

To the Editors of the *Annals of Natural History*.

GENTLEMEN,

THE expectation which I ventured to express in your Magazine for last October has been amply realized. Marine animals and plants have been exhibited in London, in their native health and beauty, in circumstances where their various functions and instincts can be carried on under the eye of the naturalist; and the inhabitants of the metropolis have enjoyed a sight of the curious

denizens of our seas, without going out of hearing of their dear Bow Bell.

What advantages to science our metropolitan zoologists have reaped from their opportunities, I leave them to record; but I propose to lay before your readers, from time to time, some notes that I have made while engaged in forming the collection. At the time of my writing these lines, about 3000 specimens of living marine animals and plants have passed through my hands, and have been successively transmitted to London for deposition in the Zoological Society's aquaria. Some of these have appeared to me as yet undescribed, others seem to be little known, except in a dried and withered state; and the great majority even of such as are considered well known, present so much of novelty and interest in their habits, that I often regret that the almost absolute absorption of my time in collecting and transmitting the specimens, forbids my jotting down a great deal of what I observe, while fresh in memory.

But without further preface I proceed to describe some new or rare species of *Invertebrata*.

Class ECHINODERMATA.

Fam. SIPUNCULIDÆ.

Sipunculus punctatissimus (mihi). The Dotted Sipunculus.

Body $1\frac{1}{2}$ inch long, $\frac{1}{8}$ in. thick; trunk $\frac{5}{8}$ in. long, $\frac{1}{20}$ in. thick. The body is cylindrical, abruptly pointed, of a satiny gloss, seen under the lens to be covered with close-set, slight, annular wrinkles. The trunk is nearly cylindrical, but slightly attenuated about the middle; it is wrinkled transversely like the body, and has in addition several irregular longitudinal furrows; the extruded tip is surrounded by about eight circles of minute black bristle-points, and terminated by a single row of short, slender filiform white tentacles, which are evertile. The general colour of the whole animal is light umber-brown, which, under a powerful lens, is resolved into a freckling of pale dots excessively minute, close-set, and numerous, on a ground of brown. I obtained it between tide-marks at Weymouth, July 1st, 1853.

Class ZOOPHYTA.

Fam. CORYNIDÆ?

Genus *SPADIX* (mihi). Root adhering, creeping for a short distance. Stem free, very flexible, girt near its base by a multitude of arborescent appendages, which bear berry-like ova. Upper part of stem fleshy, covered with papillæ. The name was

suggested by the resemblance which the animal bears to the spadix of an Aroideous flower with its surrounding berries.

Spadix purpurea (mihi). The Purple Spadix.

Height to $\frac{3}{4}$ ths of an inch: root short, thick, yellow: ovarian branches numerous, bearing globular white ova: free stem, spindle-shaped, covered with minute purple papillæ intermingled with a few white ones.

This curious form appears to be a zoophyte of the family *Corynidae*, or rather its affinities are closer with the members of that family than of any other that I know of. The habit, the club-shaped head, the motions, the manner in which the ova are clustered, their position, and their appearance, all point towards *Coryne*; and the papillæ may be considered as so many tentacles, representing the globe-headed organs of that genus, increased in number but reduced in development.

A semicylindrical thread of a pale yellow tint, about half a line in diameter, creeps along the surface of a stone for about $\frac{1}{6}$ th of an inch, when it rises into a free stalk varying in length from $\frac{1}{4}$ th to $\frac{3}{4}$ ths of an inch, being very extensile and contractile. A little way above the point of contact with the stone, the stem sends forth on every side a great number of short whitish branches with a dark core, which are again set with a number of short branchlets. These processes bear the ova, which stud their surface to the number of twenty or thirty on each: they are white globules, looking like pearls, and of various sizes, some minute, others comparatively large and conspicuous. The largest are about $\frac{1}{3}$ rd of a line in diameter. One that spontaneously detached itself had a depression at one part of its surface, where probably the point of connexion had been. The upper part or body of the animal is spindle-shaped or clavate, according to the degree of its extension; it is covered with minute oval papillæ, which are crowded so closely that no interspace is visible. These are for the most part of a reddish purple hue, with the tips deeper in tint, but isolated papillæ are scattered all over the body, which are quite white.

The movements of this animal are vigorous and lively, considering its stationary habit. The ovarian branches are frequently jerked about independently of each other; the free body is ever and anon tossed to and fro in the manner of *Coryne*; it is lengthened and shortened at will with suddenness and rapidity, and while the beholder is examining it with a lens, he is surprised by seeing that there is yet another movement among the papillæ, one or two of which, in various parts of the body, are now and then starting up with a jerk from their fellows into a more erect position, and then lying down again.

I first found this zoophyte at Lulworth on the 8th of June, and I have since obtained many other specimens at Weymouth. On each occasion the locality and circumstances were the same; rocky ledges, at extreme low water, spring-tide.

Fam. ACTINIADÆ.

Actinia miniata (mibi). The Scarlet Anemone.

Diameter to 1 inch when expanded. Disk broad, pale greenish gray, with radiating lines numerous and distinctly mottled with dark brown. Generally a conspicuous white band occupies one of the radiations. Tentacles numerous, in four rows, rather short, conical; pellucid brown, with indistinct annulations of pellucid dark brown and whitish; the base of each tentacle has two black and two bright white rings more or less distinct, alternating with each other. The outermost row of tentacles are peculiar; they consist of a sheath of pellucid brown hue, like the others, but each is permeated by a thick core of orange or vermilion, very brilliant, much resembling the central gland in the papilla of an *Eolis*. Sometimes the scarlet core is distinctly separate from the pellucid walls of the tentacle, at other times, *in the same individual*, it appears to fill the whole interior. In some specimens this phænomenon is partially or wholly wanting.

Contracted, it forms a button of about the same diameter, varying in degrees of depression or elongation, the base sometimes irregularly lobulate. Colour, a fine orange-scarlet, occasionally merging into purplish red towards the summit, studded with large pale glands, which become confluent and form pale radiating bands around the pursed mouth. Under a lens the scarlet colour is seen to run in slender veined lines.

Found adhering to oysters and pectens brought in by the trawlers: not uncommon. It may possibly be the immature state of *Act. parasitica*.

Act. clavata (Thompson), var. *rosea*. The Weymouth Anemone.

A very fine specimen when fully expanded has the disk $1\frac{1}{4}$ in. and the tentacles $\frac{1}{2}$ in. more on every side, making a diameter of $2\frac{1}{4}$ inches. It is so diaphanous as to be almost colourless, the disk showing clearly the convoluted filaments in the septal divisions. The tentacles are of a lovely rose-colour, studded with transversely-oval specks of white; they also are pellucid, and the hue is therefore much diluted; but when captured, they were deep purplish pink or crimson.

The exterior surface is rough, with multitudinous sucking glands, arranged in close-set perpendicular ridges of pale yellow warts, with a crimson freckled skin showing between. Every wart has a central crimson speck, and this seems constant; the

warts, and therefore the red specks, are exceedingly numerous ; at the margin, where they are most distinct, they rise into rounded crenations.

This species was described by Mr. W. Thompson in the 'Zoologist' for 1851, and, as I believe, from a single specimen. The name *clavata* is objectionable, as the tentacles are not clubbed, though their tips are often curled up in a peculiar manner. I will not, however, commit the robbery of depriving the discoverer of his name, merely because I think I could find one more significant. It is quite common on the rocky ledges, inhabiting fissures and the deserted holes of boring Mollusca ; but only at very low water level. There are two very distinct varieties ; the ordinary state has been described by the discoverer ; one more beautiful, but somewhat less common, I have sketched above.

Iluanthos Mitchellii. The Scarlet Free-Anemone.

Length about 2 inches, greatest diameter 1 inch. The form is stout, somewhat pear-shaped, thickening from the top for about $\frac{3}{4}$ inch, after which it gradually tapers to a blunt point at the base, in the centre of which is a minute wrinkled disk, which the animal does not appear to use as an adhesive sucker. The upper part of the body is pale scarlet, the lower two-thirds flesh-white, blotched with scarlet, the basal extremity scarlet.

The disk is very protrusile, not so wide as the body. In its centre is a prominent mouth with two thick lips of rich scarlet, toothed like that of a Caryophyllia. A ring of purplish black surrounds the lips, which is succeeded by a wider circle of white, and the remainder of the disk is pale red ; the whole marked with the usual radiating ridges. The tentacles are about thirty-six, arranged in two complete rows ; they are thick and rather short, conical, and usually curled ; the bases of the two rows are in contact, but the outer is a full sixth of an inch from the margin, and the inner about as far from the base of the oral cone. They are pellucid white, marked on their inner sides with numerous alternate bands of opaque-white and purple, sometimes taking a diagonal direction. The tentacle that is opposite the extremity of the linear mouth, on each side, is wholly dull purple, with pale bands almost obsolete.

This very fine species was brought me by one of the Weymouth trawlers : I have named it after D. W. Mitchell, Esq., the able Secretary of the Zoological Society, in whose marine aquarium the specimen itself is deposited.

I shall hope to continue this series of notes, as fresh observations occur to me, and in the meanwhile remain,

Your obedient servant,

P. H. GOSSE.

Weymouth, July 9th, 1853.